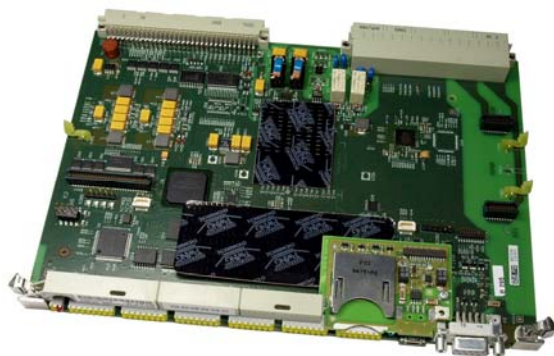
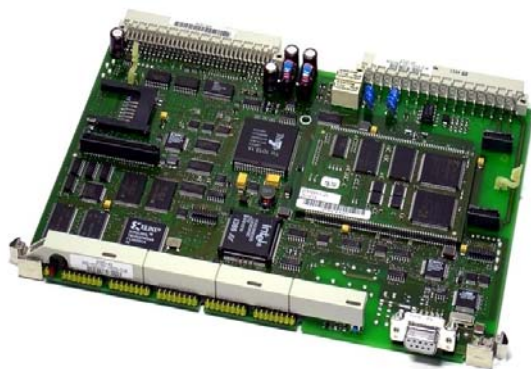


# SIEMENS

AK 1703 ACP

Instruction

Switching from CP-2010 to CP-2014



**Danger**

means that death, serious bodily injury or considerable property damage **will** occur, if the appropriate precautionary measures are not carried out.

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**Warning**

means that death, serious bodily injury or considerable property damage **can** occur, if the appropriate precautionary measures are not carried out.

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**Caution**

means that minor bodily injury or property damage could occur, if the appropriate precautionary measures are not carried out.

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**Hint**

Please observe Notes and Warnings for your own safety in the Preface.

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**Qualified Personnel**

Commissioning and operation of the equipment (module, device) described in this manual must be performed by qualified personnel only. As used in the safety notes contained in this manual, qualified personnel are those persons who are authorized to commission, release, ground, and tag devices, systems, and electrical circuits in accordance with safety standards.

**Use as Prescribed**

The equipment (device, module) must not be used for any other purposes than those described in the Catalog and the Technical Description. If it is used together with third-party devices and components, these must be recommended or approved by Siemens.

Correct and safe operation of the product requires adequate transportation, storage, installation, and mounting as well as appropriate use and maintenance.

During operation of electrical equipment, it is unavoidable that certain parts of this equipment will carry dangerous voltages. Severe injury or damage to property can occur if the appropriate measures are not taken:

- Before making any connections at all, ground the equipment at the PE terminal.
  - Hazardous voltages can be present on all switching components connected to the power supply.
  - Even after the supply voltage has been disconnected, hazardous voltages can still be present in the equipment (capacitor storage).
  - Equipment with current transformer circuits must not be operated while open.
  - The limit values indicated in the manual or the operating instructions must not be exceeded; that also applies to testing and commissioning.
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# Introduction

This document is applicable to the following product:

- AK 1703 ACP

## Purpose:

In AK 1703 ACP the Master Control Module CP-2010 is replaced because of shortage of components.

This manual describes how the Master Control Module CP-2010 is to replace by the Master Control Module CP-2014.

The following points will be described:

- 1. Required hardware**
- 2. Preparation of parameter setting**
- 3. Preparation of Master Control Module CP-2014, Mounting of SIM's and Connection Board**
- 4. Mounting and parameterization of the Module CP-2014**
- 5. Important hints**

For general information, how to install and parameterize hardware in AK 1703 ACP, see also:

HB AK 1703 ACP Installation (e)		DC2-009-2
FB AK 1703 ACP Functional Description		MC2-011-2
TOOLBOX II Onlinehelp		

## 1.) Required hardware

CP-2014 Central Processor	6MF10130CA140AA0	BC2-014
CM-2839 Connect. Comm./Sys-I/O (CP-2014)*	6MF10132CJ300AA0	BC2-839
Labelling Strip CP-2014		TC2-047--
Board label for CP-2014		TC2-048--
AK 1703 ACP Front Pan (CP-2014) 9 slots	6MF13130CA620AA1	TC2-062—
or		
AK 1703 ACP Front Pan (CP-2014) 17 slots	6MF13130CA630AA1	TC2-063--
Extracting Tool for AK-Boards		TA2-105--

\* If "CM-2837 Connect. Comm./Sys-I/O (CP-2010)" was mounted on CP-2010.

## 2.) Preparation of parameter setting

1. create a safetybackup by use of the Data Distribution Center (DDC) .
2. create a copy of the entire automation unit and drop it on a second temporary component.
3. Wizard: keep the component number, description, long text, and CAEx signals.
4. equip a new M-CPU on the original (CP2014/CPCX25), all others will be deleted after a message prompt (revisions are not applied).
5. copy the base system element (without C0-CPU and M-CPU) from the temporary copy to the original, the BSEs have to be copied severally. Signals have to be kept. (TBII V5.0: CAEx data needs to be converted.)
6. copy the protocol elements of the M-CPU from the temporary copy to the M-CPU (CP2014/CPCX25) of the original.
7. copy the peripheral element of the C0-CPU from the temporary copy to the M-CPU (CP2014/CPCX25) of the original.
8. copy the system technical parameter groups of the M-CPU from the temporary copy to the M-CPU (CP2014/CPCX25) of the original.

To take over the parameters of the CP-2010, it is necessary to copy various parameter groups. At the copying process error messages are occurring, that a number of parameters could not be copied e.g. because they are contained several times in the list of source parameters.

Open the error window to display which parameters has been successfully copied, an which could not be copied. Copy the parameters with an error severally to the CP-2014. see example (page 5)

9. copy the routing (z.B. topology) from the temporary copy to the original.
10. .copy "BSE Common settings" from the temporary copy to the original.  
**ATTENTION:** parameters of "BSE common settings" are existing at the M-CPU as well as at the C0-CPU of the temporary copy.
  - the parameter "AU common settigs / Ax peripheral internal" have to be reparameterized to the M-CPU.
  - "BSE common settings/failure behavior" and "max. number of redundant sources" can only be copied from either the M-CPU, or the C0-CPU.
  - Redundancy have to be taken over form both, M-CPU and C0-CPU, the redundancy buffer can also only be copied from either the M-CPU, or the C0-CPU.
  - From the "BSE common settings"->"advanced settings" of the C0-CPU of the copy, the parameter "QO>78 for CAEx plus" have to be copied.
11. process engineering: change link addresses to the peripheral elements via bulk edit from the C0-Cpu to the M-CPU.
12. CAEx plus: copy the CAEx plus data from the C0-CPU to the M-CPU of the original (Typ instances, tasks, global variables, oscil. settings).
13. start the "1703 Transformer"and the "CAEx plus Transformer ".
14. now, in case of a redundant configuration, the mirror parameters are to configurate.
15. OPTIONAL: if you have a cardreader and an additional flashcard you can already create the flashcard in the OPM.

**Example for article 8) "copying of the system technical parameters"**

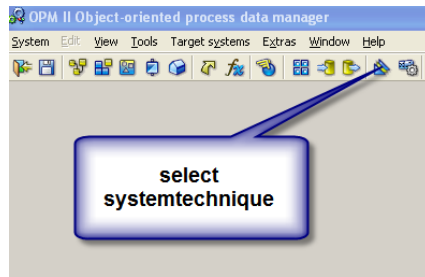


fig. 2.1.)

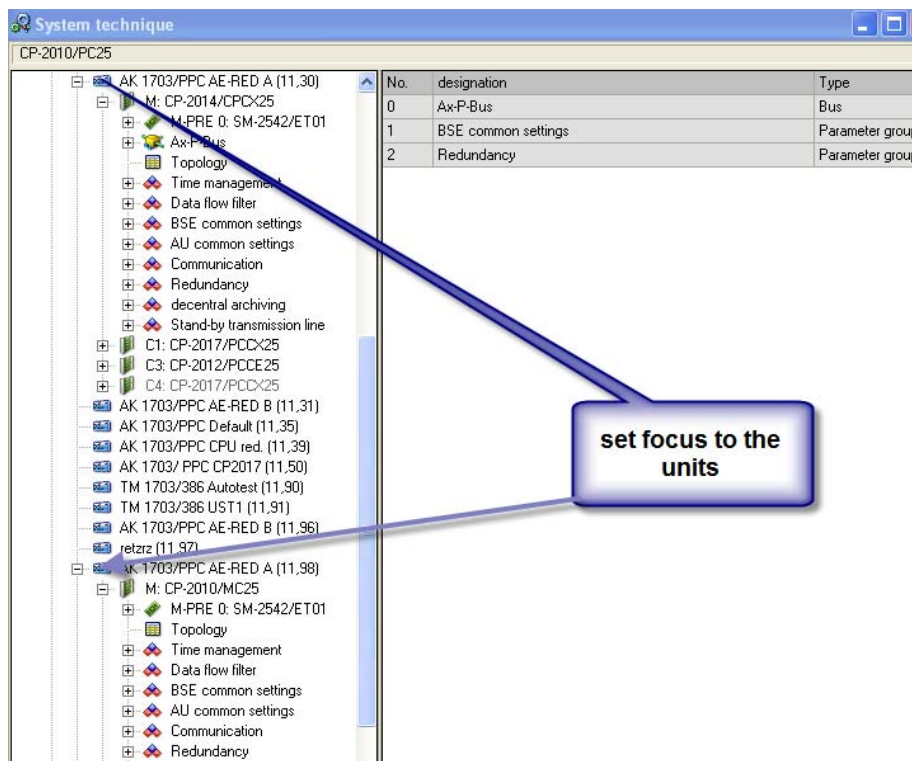


fig. 2.2.)

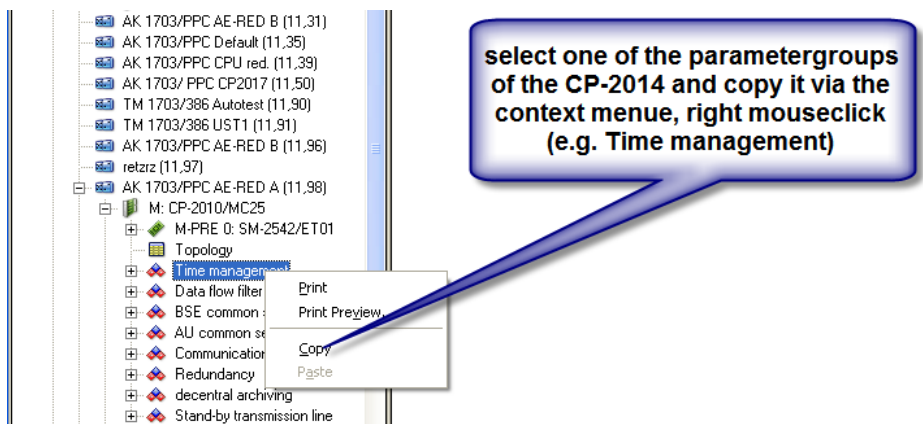


fig. 2.3.)

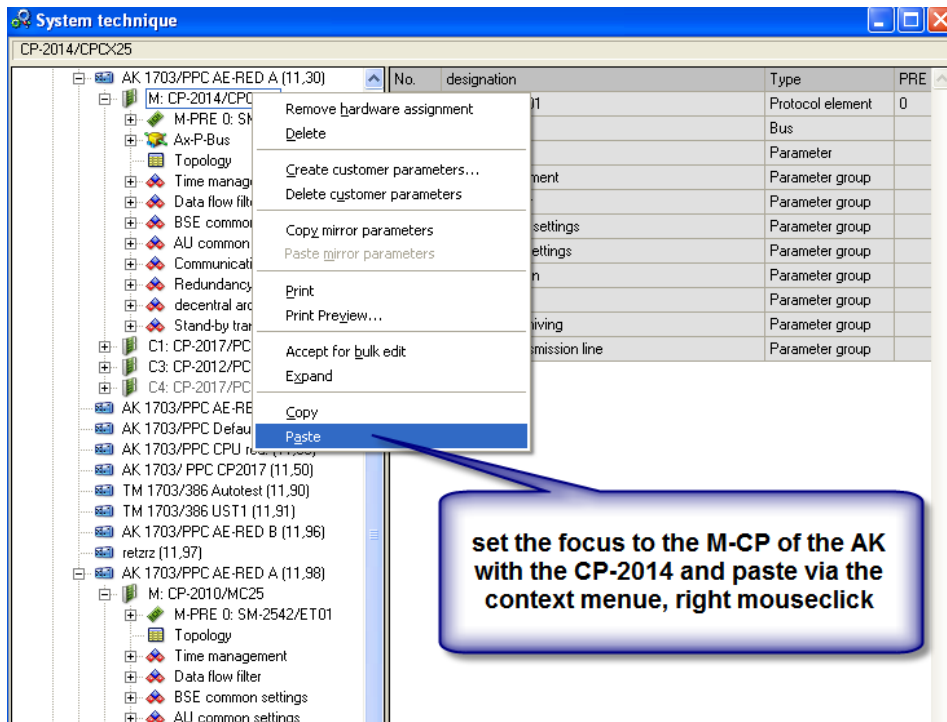


fig. 2.4.)

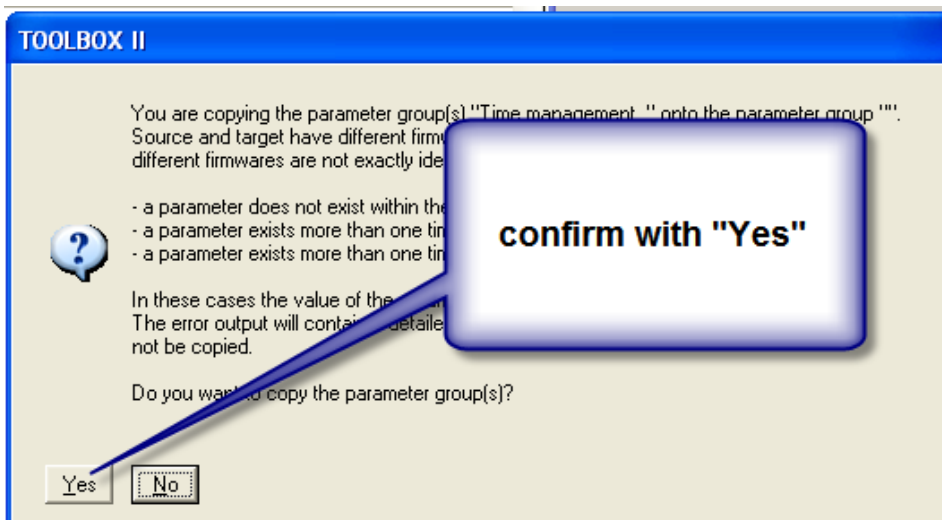


fig. 2.5.)

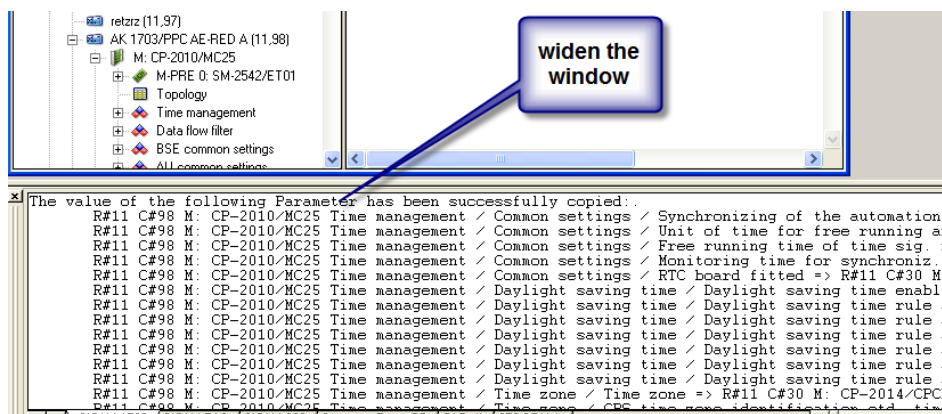


fig. 2.6.)



### 3.) Preperation of Master Control Module CP-2014, Mounting of SIM's and Connection Board

For general information, how to install and parameterize hardware in AK 1703 ACP, see also:

HB AK 1703 ACP Installation (e)

DC2-009-2



#### Warning

The activities described in this chapter presume that the grounding connection between AK 1703 ACP and cabinet or rack has been properly carried out and that these are earthed.

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#### 3.1) Connect and put on Grounding Strap



The grounding strap can be connected directly to the mounting rack. The connection point is located on the left side panel of the mounting racks.

#### 3.2) Remove Front Panel

- Open the knurled screws which connect the front panel with the mounting rack.

#### 3.3.) Remove CP-2010

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##### Attention

The master control element CP-2010 may only be removed in de-energized state. This does not apply to the other modules (processing and communication element, peripheral element).

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For the removal of a module, you will need the unlocking tool TA2-105. This is included in the scope of supply of every mounting rack and must be inserted in the bracket provided on the mounting rack during installation.

For removal of a module proceed as described in installation manual AK 1703 ACP (HB AK 1703 ACP Installation (e))

#### 3.4.) Remove Connection Board (if mounted)

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##### Attention

Master control elements and processing- and communication elements must **NOT** be installed in the mounting rack during the fitting of the associated connection boards.

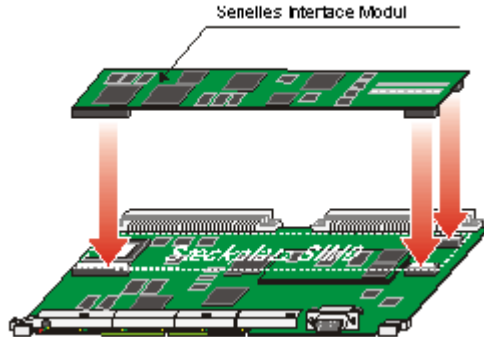
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For removal of the connection board CM-2837 proceed as described in installation manual AK 1703 ACP (HB AK 1703 ACP Installation (e))



### 3.5.) Installation of the SIM

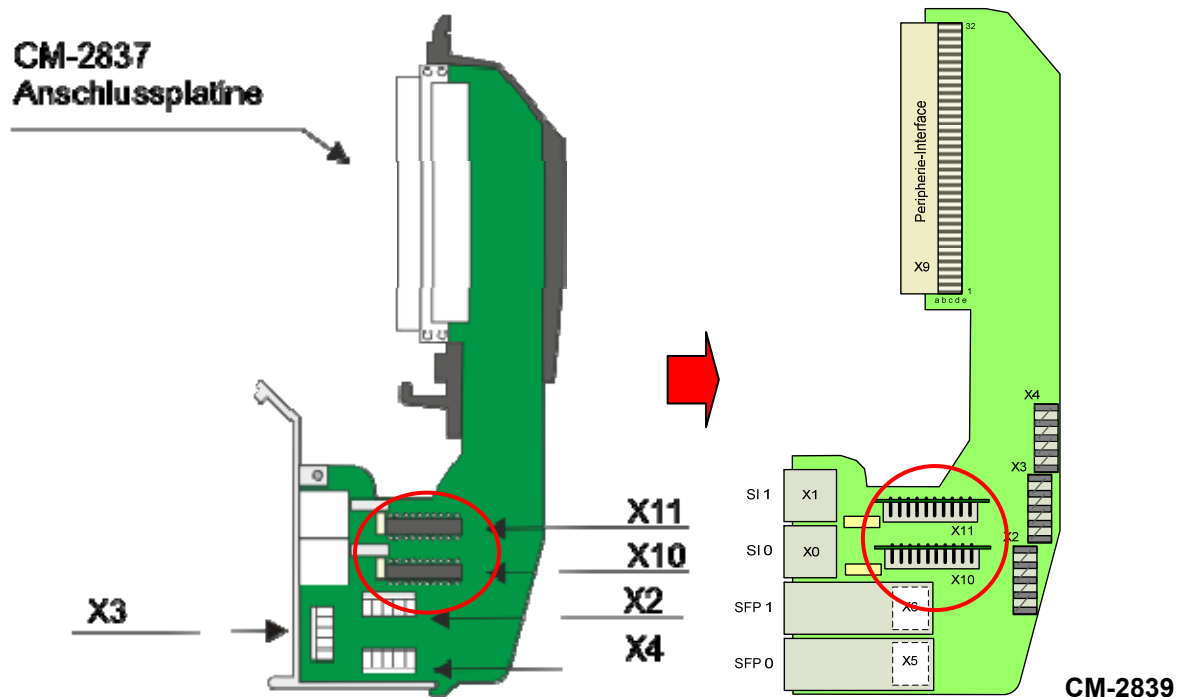
Unplug the retainer clips and connectors of the serial interface modul at the CP-2010, and mount it at the designated slot of the CP-2014.



### 3.6.) Fitting Connection Board with Patch Plugs(wenn Anschlussplatine CM-2837 auf CP-2010 bestückt war)

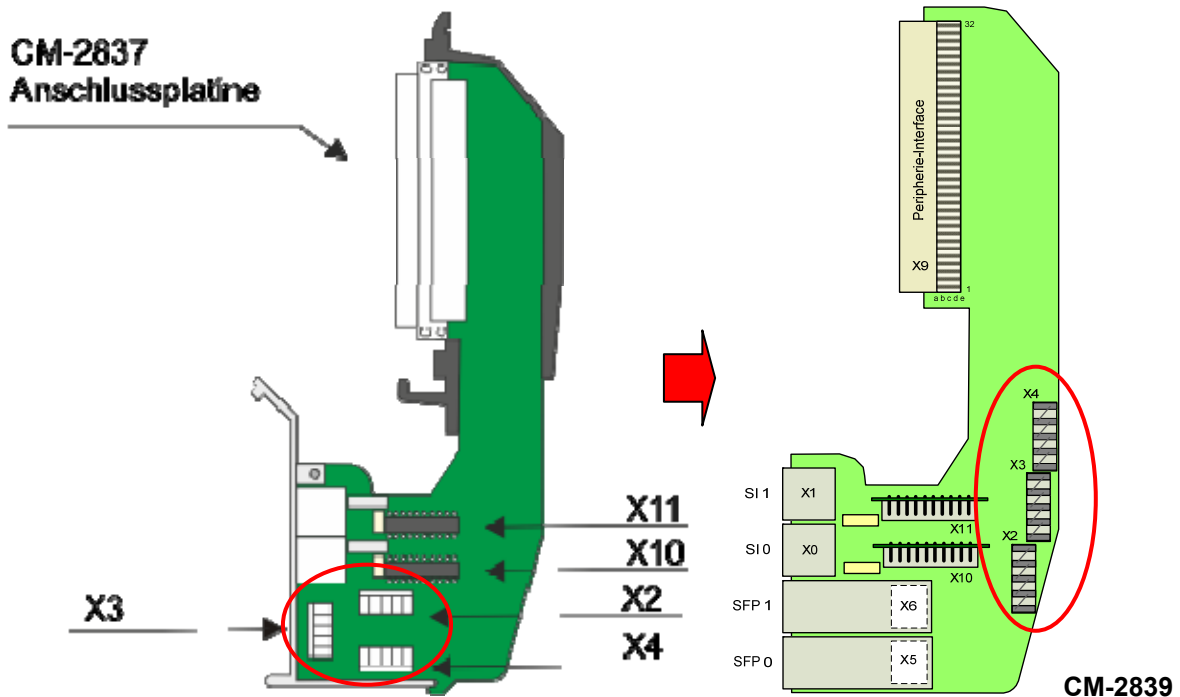
These Patch Plugs must be fitted before the connection boards are installed on the mounting rack.

Unplug the Patch Plugs from the sockets of the CM-2837, and plug them into the respective socket connector (X11, X12) of the CM-2839.



### 3.7.) Wiring for Reception of Time Signals, Watchdog and Error (if CM-2837 was mounted on CP-2010)

For wiring proceed as described in installation manual AK 1703 ACP (HB AK 1703 ACP Installation (e))  
Only the position of the connectors X2, X3, X4 was changed.



### 3.8.) Installing Connection Board CM-2839 (if CM-2837 was mounted on CP-2010)

#### Attention

Master control elements and processing- and communication elements must **NOT** be installed in the mounting rack during the fitting of the associated connection boards..

The fitting is carried out by engaging the connection board in the red seating frame and subsequent screwing with the fastening bracket on the underside of the mounting rack.

For installing proceed as described in installation manual AK 1703 ACP (HB AK 1703 ACP Installation (e))

## 4.) Installation and loading of parameters of CP-2014

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### Attention

Before the installation of a module the associated connection board (CM-2837, CM-2838) or the peripheral cable (CM-2890) must already be fitted.

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- Insert the Flashcard .

### 4.1.) Installation

The installation of modules is carried by hand without any tools. Proceed as follows:

- Connect/put on grounding strap and remove front panel.
- Place the module in the guide bracket of the desired slot and push it carefully up to the connectors located at the bottom.
- Then apply the same pressure at both unlocking blocks in order to connect the module with the backplane and connection board or peripheral cable.
- After the installation of the module, the labeling strip of the CP-2014 is to be inserted in the new front panel (AK 1703 ACP Front Pan (CP-2014) 9 slots, TC2-062-- or AK 1703 ACP Front Pan (CP-2014) 17 slots, TC2-063--), then position the front panel and tighten the knurled screws.

### 4.2.) Loading of parameters

- If the inserted Flashcard was already created and loaded in the OPM Flashcard the further steps to not apply.

#### OR

- If the Flashcard was not already loaded with the parameters, establish an online connection with the TOOLBOX II.
- Initialise the parameters of the automation unit with the parametrer loader.
- Load the firmware of the automation unit.

The temporary component (copy) created with TOOLBOX II at the beginning can now be deleted.

## **5.) important hints**

### **5.1) PS-5620**

CP-2014 detects a failure of PS if using Power supply PS-5620 (BC5-620-B with revision <15, BC5-620-E with revision <02).

This Defect is solved in BC5-620-B Rev. 15, BC5-620-E Rev. 02.

### **5.2.) PS-5622**

CP-2014 detects a failure of PS if using Power supply PS-5622 (BC5-622-B with revision < 25, BC5-622-E with revision < 04)

This Defect is solved in BC5-622-B Rev. 25, BC5-622-E Rev. 04.



